

Title (en)
DEVICE AND METHOD FOR PRODUCING A THREE-DIMENSIONAL OBJECT LAYER BY LAYER AND NOZZLE FOR GASFLOW INTO THE DEVICE

Title (de)
VORRICHTUNG UND VERFAHREN ZUM SCHICHTWEISEN HERSTELLEN EINES DREIDIMENSIONALEN OBJEKTS SOWIE DÜSENELEMENT ZUM EINLEITEN EINES GASSTROMS IN DIE VORRICHTUNG

Title (fr)
SYSTÈME ET PROCÉDÉ DE FABRICATION PAR COUCHES D'UN OBJET TRIDIMENSIONNEL ET BUSE POUR INDUCTION DE GAS DANS LE SYSTÈME

Publication
EP 3122538 B1 20200429 (DE)

Application
EP 15712902 A 20150327

Priority
• DE 102014205875 A 20140328
• EP 2015056722 W 20150327

Abstract (en)
[origin: WO2015144884A1] The invention relates to a device (1) for producing a three-dimensional object (2) by solidifying, layer by layer, structural material (13) at locations in the respective layer corresponding to the cross-section of the object (2) to be produced, comprising a flow device (31, 32, 34, 35) for generating a gas flow above an applied layer of the structural material (13) by means of a nozzle element (40) for introducing the gas into the device. The nozzle element (40) comprises a body (41) having a gas inlet side (44) and a gas outlet side (46), and a plurality of channels (42), which penetrate the body from the gas inlet side (44) to the gas outlet side (46), are provided with inlet openings (45) on the gas inlet side (44) and with gas outlet openings (47) on the gas outlet side (46), and which are separated by walls (43). The length of the channels (42) is selected such that a laminar flow on the gas outlet side (46) is formed therein.

IPC 8 full level
B29C 64/371 (2017.01); **B29C 64/153** (2017.01)

CPC (source: EP US)
B22F 10/28 (2021.01 - EP US); **B22F 10/322** (2021.01 - EP US); **B22F 12/70** (2021.01 - EP US); **B23K 26/144** (2015.10 - US); **B23K 26/1476** (2013.01 - US); **B23K 26/342** (2015.10 - US); **B28B 1/001** (2013.01 - US); **B28B 17/0081** (2013.01 - US); **B29C 64/153** (2017.07 - EP US); **B29C 64/20** (2017.07 - US); **B29C 64/35** (2017.07 - US); **B29C 64/371** (2017.07 - EP US); **B29C 64/386** (2017.07 - US); **B33Y 10/00** (2014.12 - US); **B33Y 30/00** (2014.12 - US); **B33Y 40/00** (2014.12 - EP US); **B33Y 50/02** (2014.12 - US); **B22F 12/41** (2021.01 - EP US); **B22F 12/49** (2021.01 - EP US); **B22F 2998/10** (2013.01 - US); **B29C 64/165** (2017.07 - EP US); **B29K 2105/251** (2013.01 - US); **Y02P 10/25** (2015.11 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102014205875 A1 20151001; CN 106132669 A 20161116; CN 114311658 A 20220412; EP 3122538 A1 20170201; EP 3122538 B1 20200429; US 10682700 B2 20200616; US 2017216916 A1 20170803; WO 2015144884 A1 20151001

DOCDB simple family (application)
DE 102014205875 A 20140328; CN 201580016176 A 20150327; CN 202210103885 A 20150327; EP 15712902 A 20150327; EP 2015056722 W 20150327; US 201515129333 A 20150327